WHAT IS CLAIMED IS:

1. A method for manufacturing a color filter, comprising:

scanning a substrate for main scan by moving a plurality of heads in a head scan direction, each head having a plurality of nozzles arranged with a constant layout pitch;

scanning the substrate for sub scan by moving the heads with a predetermined motion pitch in a head line-feed direction which is perpendicular to the head scan direction; and

ejecting a filter material through the plurality of nozzles to filter element formation regions of the substrate,

a relational equation of $W=mD$ (m is an integer of 2 or larger) substantially holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at an adjacent end of an adjacent head, and (D) is the constant layout pitch of the nozzles, and

a relational equation of $P=nD$ (n is an integer of 1 or larger) substantially holding where (P) is a sub scanning motion pitch of the heads and (D) is the constant layout pitch of the nozzles.

2. A method for manufacturing a color filter according to claim 1, the heads being arranged at an angle θ with respect to the head line-feed direction, the angle θ being within a range of $0°<\theta<180°$, a relational equation of $W=mD \cos \theta$ (m is an integer of 2 or larger) substantially holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at the adjacent end of an adjacent head, and ($D \cos \theta$) is a layout pitch of the nozzles in the head line-feed direction, and

a relational equation $P=nD \cos \theta$ (n is an integer of 1 or larger) substantially holding where (P) is the sub scanning motion pitch of the heads in the head line-feed direction and ($D \cos \theta$) is the layout pitch of the nozzles in the head line-feed direction.

3. A method for manufacturing a color filter according to claim 1, the nozzle positioned at the end of the head being designed not to eject the filter material to the filter element formation region of the substrate.

4. A method for manufacturing a color filter according to claim 1, the filter material containing liquid materials of a plurality of colors, and

the plurality of nozzles in each of the plurality of heads ejecting a liquid material of one of the plurality of colors.

5. A method for manufacturing a color filter according to claim 1, the filter material containing liquid materials of a plurality of colors, and

the plurality of nozzles in each of the plurality of heads respectively ejecting the liquid materials of the plurality of colors.

6. A apparatus for manufacturing a color filter, comprising:

a plurality of nozzles for ejecting a filter material in droplets;

a plurality of heads, each head having a plurality of nozzles arranged with a constant layout pitch of (D);

a main scan driving device that moves the heads in a head scan direction; and

a sub scan driving device that moves the heads with a predetermined motion pitch (P) in a head line-feed direction which is perpendicular to the head scan direction,

a relational equation of $W=mD$ (m is an integer of 2 or larger) substantially holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at the adjacent end of an adjacent head, and (D) is the constant layout pitch of the nozzles, and

a relational equation of $P=nD$ (n is an integer of 1 or larger) substantially holding where (P) is the sub scanning motion pitch of the heads and (D) is the constant layout pitch of the nozzles.

7. A apparatus for manufacturing a color filter according to claim 6, the heads being arranged at an angle θ with respect to the head line-feed direction, the angle θ being within a range of $0° < \theta < 180°$, a relational equation of $W=mD \cos\theta$ (m is an integer of 2 or larger) substantially holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at an adjacent end of an adjacent head, and ($D \cos\theta$) is the layout pitch of the nozzles in the head line-feed direction, and

a relational equation $P=nD \cos\theta$ (n is an integer of 1 or larger) substantially holding where (P) is the sub scanning motion pitch of the heads in the head line-feed direction and ($D \cos\theta$) is the layout pitch of the nozzles in the head line-feed direction.

8. A method for manufacturing a liquid-crystal display, including a step of forming a color filter, the color filter being formed in accordance with the method for manufacturing a color filter according to claim 1.

9. An apparatus for manufacturing a liquid-crystal display including a color filter, the apparatus for manufacturing the liquid-crystal display comprising the apparatus for manufacturing the color filter according to claim 6.

10. A method for manufacturing an electroluminescence substrate, comprising:

scanning a substrate for main scan by moving a plurality of heads in a head scan direction, each head having a plurality of nozzles arranged with a constant layout pitch;

scanning the substrate for sub scan by moving the heads with a predetermined motion pitch in a head line-feed direction which is perpendicular to the head scan direction; and

ejecting a functional layer forming material through the plurality of nozzles to functional layer forming regions of the substrate,

a relational equation of W=mD (m is an integer of 2 or larger) substantially holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at an adjacent end of an adjacent head, and (D) is the constant layout pitch of the nozzles, and

a relational equation of P=nD (n is an integer of 1 or larger) substantially holding where (P) is a sub scanning motion pitch of the heads and (D) is the constant layout pitch of the nozzles.

11. A method for manufacturing an electroluminescence substrate according to claim 10, the heads being arranged at an angle θ with respect to the head line-feed direction, the angle θ being within a range of $0° < \theta < 180°$, a relational equation of $W = mD \cos\theta$ (m is an integer of 2 or larger) substantially holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at the adjacent end of an adjacent head, and ($D \cos\theta$) is a layout pitch of the nozzles in the head line-feed direction, and

a relational equation $P = nD \cos\theta$ (n is an integer of 1 or larger) substantially holding where (P) is the sub scanning motion pitch of the heads in the head line-feed direction and ($D \cos\theta$) is the layout pitch of the nozzles in the head line-feed direction.

12. A method for manufacturing an electroluminescence substrate according to claim 10, the nozzle positioned at the end of the head being designed not to eject the functional layer forming material to the functional layer formation region of the substrate.

13. A method for manufacturing an electroluminescence substrate according to claim 10, the functional layer forming material being a light emission layer forming material.

14. A method for manufacturing an electroluminescence substrate according to claim 10, the functional layer forming material being a hole injection and transport layer forming material.

15. A method for manufacturing an electroluminescence substrate according to claim 10, the functional layer forming material comprising a material selected from the group of a light emission layer forming material and a hole injection and transport layer forming material.

16. A method for manufacturing an electroluminescence substrate according to claim 13, the light emission layer forming material containing a plurality of materials different from each other in emission color, and

the plurality of nozzles in each head ejecting one of the plurality of materials different from each other in emission color.

17. A method for manufacturing an electroluminescence substrate according to claim 13, the light emission layer forming material containing a plurality of materials different from each other in emission color, and

each of the plurality of nozzles in each head ejecting a respective one of the plurality of materials different from each other in emission color.

18. A apparatus for manufacturing an electroluminescence substrate, comprising:

a plurality of nozzles that eject a functional layer forming material in droplets,

a plurality of heads, each head having a plurality of nozzles arranged with a constant layout pitch of (D);

a main scan driving device that moves the heads in a head scan direction; and

a sub scan driving device that moves the heads with a predetermined motion pitch (P) in a head line-feed direction which is perpendicular to the head scan direction,

a relational equation of $W=mD$ (m is an integer of 2 or larger) substantially holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at an adjacent end of an adjacent head, and (D) is the constant layout pitch of the nozzles, and

a relational equation of $P=nD$ (n is an integer of 1 or larger) substantially holding where (P) is the sub scanning motion pitch of the heads and (D) is the constant layout pitch of the nozzles.

19. A apparatus for manufacturing an electroluminescence substrate according to claim 18, the heads being arranged at an angle θ with respect to the head line-feed direction, the angle θ being within a range of $0°<\theta<180°$, a relational equation of $W=mD \cos \theta$ (m is an integer of 2 or larger) substantially holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at the adjacent end of an adjacent head, and ($D \cos \theta$) is the layout pitch of the nozzles in the head line-feed direction, and

a relational equation $P=nD \cos \theta$ (n is an integer of 1 or larger) substantially holding where (P) is the sub scanning motion pitch of the heads in the head line-feed direction and ($D \cos \theta$) is the layout pitch of the nozzles in the head line-feed direction.

20. A method for manufacturing an electroluminescence device, including a step of forming a functional layer, the functional layer being formed in accordance with the method for manufacturing the electroluminescence substrate according to claim 10.

21. An apparatus for manufacturing an electroluminescence device including an electroluminescence substrate, the apparatus for manufacturing the electroluminescence device comprising the apparatus for manufacturing the electroluminescence substrate according to claim 18.

22. A head scanning method, comprising:

scanning a substrate for main scan by moving a plurality of heads in a head scan direction, each head having a plurality of nozzles arranged with a predetermined layout pitch;

scanning the substrate for sub scan by moving the heads with a predetermined motion pitch in a head line-feed direction which is perpendicular to the head scan direction; and

ejecting a discharge material through the plurality of nozzles to the substrate,

a relational equation of $W=mD$ (m is an integer of 2 or larger) substantially holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at the adjacent end of an adjacent head, and (D) is the constant layout pitch of the nozzles, and

a relational equation of $P=nD$ (n is an integer of 1 or larger) substantially holding where (P) is the sub scanning motion pitch of the heads and (D) is the constant layout pitch of the nozzles.

23. A head scanning method according to claim 22, the heads being arranged at an angle θ with respect to the head line-feed direction, the angle θ being within a range of $0°<\theta<180°$, a relational equation of $W=mD \cos \theta$ (m is an integer of 2 or larger) substantially holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at the adjacent end of an adjacent head, and ($D \cos \theta$) is the layout pitch of the nozzles in the head line-feed direction, and

a relational equation $P=nD \cos \theta$ (n is an integer of 1 or larger) substantially holding where (P) is the sub scanning motion pitch of the heads in the head line-feed direction and ($D \cos \theta$) is the layout pitch of the nozzles in the head line-feed direction.

24. A head scanning method according to claim 22, the nozzle positioned at the end of the head being designed not to eject the discharge material to a discharge material deposit region of the substrate.

25. A head scanning method according to claim 22, the discharge material containing a plurality of materials different from each other in characteristics, and the plurality of nozzles in each head ejecting one of the plurality of materials different from each other in the characteristics.

26. A head scanning method according to claim 22, the discharge material containing a plurality of materials different from each other in characteristics, and each of the plurality of nozzles in each head ejecting a respective one of the plurality of materials different from each other in the characteristics.

27. A head scanning apparatus, comprising:

a plurality of nozzles that eject a discharge material in droplets;

a plurality of heads, each head having a plurality of nozzles arranged with a constant layout of pitch of (D);

a main scan driving device that moves the heads in a head scan direction; and

a sub scan driving device that moves the heads with a predetermined motion pitch (P) in a head line-feed direction which is perpendicular to the head scan direction,

a relational equation of $W=mD$ (m is an integer of 2 or larger) substantially holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at the adjacent end of an adjacent head, and (D) is the constant layout pitch of the nozzles, and

a relational equation of $P=nD$ (n is an integer of 1 or larger) substantially holding where (P) is the sub scanning motion pitch of the heads and (D) is the constant layout pitch of the nozzles.

28. A head scanning apparatus according to claim 27, the heads being arranged at an angle θ with respect to the head line-feed direction, the angle θ being within a range of $0°<\theta<180°$, a relational equation of $W=mD \cos \theta$ (m is an integer of 2 or larger) substantially holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at an adjacent end of an adjacent head, and ($D \cos \theta$) is the layout pitch of the nozzles in the head line-feed direction, and

a relational equation $P=nD \cos \theta$ (n is an integer of 1 or larger) substantially holding where (P) is the sub scanning motion pitch of the heads in the head line-feed direction and ($D \cos \theta$) is the layout pitch of the nozzles in the head line-feed direction.

29. A film forming method, comprising:

scanning a substrate for main scan by moving a plurality of heads in a head scan direction, each head having a plurality of nozzles arranged with a constant layout pitch;

scanning the substrate for sub scan by moving the heads with a predetermined motion pitch in a head line-feed direction which is perpendicular to the head scan direction; and

ejecting a film forming material through the plurality of nozzles to film formation regions of the substrate,

a relational equation of $W \approx mD$ (m is an integer of 2 or larger) holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at an adjacent end of an adjacent head, and (D) is the constant layout pitch of the nozzles, and

a relational equation of $P \approx nD$ (n is an integer of 1 or larger) holds where (P) is the sub scanning motion pitch of the heads and (D) is the constant layout pitch of the nozzles.

30. A film forming method according to claim 29, the heads being arranged at an angle θ with respect to the head line-feed direction, the angle θ being within a range of $0° < \theta < 180°$, a relational equation of $W \approx mD \cos \theta$ (m is an integer of 2 or larger) holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at the adjacent end of an adjacent head, and ($D \cos \theta$) is the layout pitch of the nozzles in the head line-feed direction, and

a relational equation $P \approx nD \cos \theta$ (n is an integer of 1 or larger) holding where (P) is the sub scanning motion pitch of the heads in the head line-feed direction and ($D \cos \theta$) is the layout pitch of the nozzles in the head line-feed direction.

31. A film forming method according to claim 29, the nozzle positioned at the end of the head being designed not to eject the film forming material to the film formation region of the substrate.

32. A film forming method according to claim 29, the film forming material containing a plurality of materials different from each other in characteristics, and the plurality of nozzles in each head ejecting one of the plurality of materials different from each other in the characteristics.

33. A film forming method according to claim 29, the film forming material containing a plurality of materials different from each other in characteristics, and each of the plurality of nozzles in each head ejecting a respective one of the plurality of materials different from each other in the characteristics.

34. A film forming apparatus, comprising:

a plurality of nozzles that ejects a film forming material in droplets;

a plurality of heads, each head having a plurality of nozzles arranged with a constant layout of pitch of (D);

a main scan driving device that moves the heads in a head scan direction; and

a sub scan driving device that moves the heads with a predetermined motion pitch (P) in a head line-feed direction which is perpendicular to the head scan direction,

a relational equation of $W \approx mD$ (m is an integer of 2 or larger) holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at the adjacent end of an adjacent head, and (D) is the constant layout pitch of the nozzles, and

a relational equation of $P \approx nD$ (n is an integer of 1 or larger) holding where (P) is the sub scanning motion pitch of the heads and (D) is the constant layout pitch of the nozzles.

35. A film forming apparatus according to claim 34, the heads being arranged at an angle θ with respect to the head line-feed direction, the angle θ being within a range of $0° < \theta < 180°$, a relational equation of $W \approx mD \cos \theta$ (m is an integer of 2 or larger) holding where (W) is the spacing between a nozzle at one end of a head and a nozzle at the adjacent end of an adjacent head, and ($D \cos \theta$) is the layout pitch of the nozzles in the head line-feed direction, and

a relational equation $P \approx nD \cos \theta$ (n is an integer of 1 or larger) holding where (P) is the sub scanning motion pitch of the heads in the head line-feed direction and ($D \cos \theta$) is the layout pitch of the nozzles in the head line-feed direction.

36. A method for manufacturing an electrooptical device, the method using a film forming method according to claim 29.

37. An electrooptical device manufactured in accordance with the method for manufacturing the electrooptical device according to claim 36.

38. Electronic equipment comprising the electrooptical device according to claim 37.

39. Electronic equipment comprising a liquid-crystal display manufactured in accordance with the method for manufacturing the liquid-crystal display according to claim 8.

40. Electronic equipment comprising an electroluminescence device manufactured in accordance with the method for manufacturing the electroluminescence device according to claim 20.